

U.S. Serial No. 10/780,772

ASA-5051

**REMARKS**

The Applicants request reconsideration of the rejection dated February 10, 2006, as follows.

Claims 1-2 and 4-18 are pending.

Claims 1-2 and 4-18 were rejected under 35 U.S.C. 102(e) as being anticipated by Doing, U.S. 2003/0009648 (Doing) in view of DeKoning, et al., US 6,216,199 (DeKoning). The Applicants traverse as follows.

The control unit claimed in claim 1 includes a first processor which translates data of a file access into block data, a second processor which controls the plurality of disk drives on the basis of the block data, a cache memory, and a disk interface which connects the cache memory and the plurality of disk drives. According to the newly-amended claim 1, the control unit logically partitions into units the host interface, the first processor, the second processor, the cache memory, the disk interface, and the plurality of disk drives, and causes the units to operate as a plurality of virtual storages independently.

Doing, on the other hand, does not disclose or fairly suggest the claimed logical partitioning within the storage system. Doing is seen to disclose logical partitioning of a computer system 100, but of a type different from that set forth in independent claim 1. For example, in paragraph [0065], Doing discloses,

Logical partitioning means that the system is logically divided into multiple subsets called logical partitions, and some of the system resources are assigned to particular logical partitions, while other resources are shared among partitions. In the preferred embodiment, processors and real memory are assigned to logical partitions in a partitioned system, while buses, I/O controllers, and I/O devices are shared, it being understood that it would be

U.S. Serial No. 10/780,772

ASA-5051

possible to assign different types and mixtures of devices to partitions. In a logically partitioned system, each processor of the multiprocessor system is assigned to a partition, along with a subset of the real memory address space. With limited exceptions (explained below), tasks executing on a processor can only access real memory within that processor's subset of the real memory address space. This has the effect of isolating tasks executing on different processors in different logical partitions. From the standpoint of CPU and memory, the logically partitioned multiprocessor computer system behaves very much like multiple separate computer systems. This avoids some of the contention and other overhead issues associated with prior art multiprocessor systems. At the same time, the different logical partitions share hardware resources such as disk storage and I/O, as well as certain low level software resources. Thus, many of the advantages of a multiprocessor system over multiple discrete single processor systems are maintained. Furthermore, it is possible for multiple processors to share a single logical partition. For example, a computer system containing 16 processors could be configured in four logical partitions, each containing four processors, and resembling in certain characteristics the performance of four 4-way multiprocessor systems as opposed to a single 16-way multiprocessor system. (emphasis added)

In particular, the underlined portions emphasize that certain resources are shared, even across partitions. Note also that Doing fails to show the claimed partitioning of the disk interface.

Further, Doing's CPUs 101A, 101B (Fig. 1) constitute separate processors of the multiprocessor computer system 100 for utilizing the disclosed logical partitioning architecture. Doing does not appear to partition CPUs 101A and 101B in the manner required by the claims if CPUs 101A and 101B were to correspond to the claimed first and second processors. More specifically, Doing is not seen to disclose that CPUs 101A, 101B constitute units with a host interface, cache memory, disk interface, and plurality of disk drives, all partitioned accordingly, so as to operate as a plurality of virtual storages independently.